

WHAT IS CLAIMED IS:

1. A method for enhancing the water repellency of an inorganic hydraulic binder composition, characterized in that a sufficient amount of at least one monovalent cation salt of a carboxylic acid is added to said composition.
2. The method as claimed in claim 1, characterized in that the monovalent cation salt of a carboxylic acid is incorporated in the form of a powder in the inorganic hydraulic binder composition.
3. The method as claimed in claim 1 or 2, characterized in that the sufficient amount is between 0.001% and 3% by dry weight of the monovalent cation salt of a carboxylic acid, with respect to the total weight of the composition.
4. The method as claimed in claim 3, characterized in that the sufficient amount is between 0.01% and 0.5% by dry weight of the monovalent cation salt of a carboxylic acid, with respect to the total weight of the composition.
5. The method as claimed in claim 3, characterized in that the sufficient amount is between 0.03% and 0.15% by dry weight of the monovalent cation salt of a carboxylic acid, with respect to the total weight of the composition.
6. The method as claimed in any one of claims 1 to 5, characterized in that the monovalent cation salt of a carboxylic acid is mixed with a latex composition before its addition to the hydraulic binder composition.
7. The method as claimed in claim 6, in which the

amount of the monovalent cation salt of a carboxylic acid, with respect to the total weight of dry latex, is between 0.1 and 20% by weight, with respect to the weight of the dry latex.

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8. The method as claimed in either one of claims 6 and 7, characterized in that the monovalent cation salt of a carboxylic acid is added in the powder form to the latex composition in the form of a redispersible powder.

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9. The method as claimed in either of claims 6 and 7, characterized in that the monovalent cation salt of a carboxylic acid is added in the powder or solution form to the latex composition in the form of an aqueous dispersion during the polymerization or at the end of the polymerization.

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10. The method as claimed in either of claims 6 and 7, characterized in that the monovalent cation salt of a carboxylic acid is added in the powder form to the latex composition during the drying by atomization of the latex.

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11. The method as claimed in any one of claims 6 to 10, in which the latex composition comprises:

at least one water-insoluble polymer,

from 0 to 35% by weight, with respect to the total weight of the polymer, of at least one protective colloid,

from 0 to 30% by weight, with respect to the total weight of the polymer, of anticaking agents, and

from 0.1 to 20% by weight, with respect to the total weight of the polymer, of at least one monovalent cation salt of a carboxylic acid.

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12. The method as claimed in claim 11, characterized in that the water-insoluble polymer is obtained by polymerization of monomers chosen from:

- vinyl esters and more particularly vinyl acetate;
- alkyl acrylates and methacrylates, the alkyl group of which comprises from 1 to 10 carbon atoms, for example methyl, ethyl, n-butyl or 2-ethylhexyl

5 acrylates and methacrylates, .

- vinylaromatic monomers, in particular styrene.

These monomers can be copolymerized with one another or with other monomers possessing ethylenic unsaturation to form homopolymers, copolymers or terpolymers.

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13. The method as claimed in claim 12, characterized in that the monomers are copolymerized with other monomers possessing ethylenic unsaturation chosen from ethylene and olefins, such as isobutene; vinyl esters

15 of saturated, branched or unbranched, monocarboxylic acids having from 1 to 12 carbon atoms, such as vinyl propionate, vinyl "Versataste" (registered trade mark for the esters of branched C₉-C₁₁ acids), vinyl pivalate or vinyl laurate; esters of unsaturated mono- or

20 dicarboxylic acids having 3 to 6 carbon atoms with alkanols having 1 to 10 carbon atoms, such as methyl, ethyl, butyl or ethylhexyl maleates or fumarates; vinylaromatic monomers, such as methylstyrenes or

vinyltoluenes; vinyl halides, such as vinyl chloride or

25 vinylidene chloride; diolefins, particularly butadiene; (meth)allyl esters of (meth)acrylic acid; (meth)allyl esters of the mono- and diesters of maleic, fumaric and itaconic acids; and alkene derivatives of amides of acrylic and methacrylic acids, such as N-

30 methallylmaleimide.

14. The method as claimed in claim 13, characterized in that the addition is carried out, to the monomers which can be copolymerized with vinyl acetate and/or

35 acrylic esters and/or styrene, of at least one other monomer chosen from the following list: acrylamide, carboxylic or dicarboxylic acids possessing ethylenic unsaturation, preferably acrylic acid or methacrylic acid, sulfonic acids possessing ethylenic unsaturation

and salts of the latter, preferably vinylsulfonic acid or 2-acrylamido-2-methylpropanesulfonic acid (AMPS), or sodium methallylsulfonate.

5 15. The method as claimed in claim 11, in which the anticaking agents used comprise aluminum silicates, calcium or magnesium carbonates, or mixtures of these, silicas, aluminum hydrate, bentonite, talc, or mixtures of dolomite and of talc, or of calcite and of talc,
10 kaolin, barium sulfate, titanium oxide, or calcium sulfoaluminate (satin white).

16. The method as claimed in any one of claims 1 to
15, in which the monovalent cation salt of a carboxylic acid used has the formula $C_nH_{(2n-1)}OO^-X^+$ in which n = 4 to 18 and X is chosen from sodium, potassium, lithium, ammonium or quaternary amines.

17. The method as claimed in claim 16, in which n = 8
20 to 16.

18. The method as claimed in either one of claims 16 and 17, in which n = 12.

25 19. The method as claimed in any one of claims 1 to 18, in which the monovalent cation salt of a carboxylic acid is chosen from sodium laurate and/or potassium laurate.

30 20. The method as claimed in any one of claims 1 to 19, in which the hydrocarbon chain of the carboxylic acid salt comprises halogens, hydroxyl groups, ether groups, thioether groups, ester groups, amide groups, carboxyl groups, sulfonic acid groups, carboxylic 35 anhydride groups and/or carbonyl groups.

21. The method as claimed in any one of claims 1 to 20, characterized in that the hydraulic binder is chosen from cements which can be of Portland, high-

alumina or blast-furnace type, fly ash, calcined shales or pozzolans.

22. The method as claimed in any one of claims 1 to
5 21, characterized in that the hydraulic binder is chosen from cements.

23. A product capable of being obtained by the method as claimed in any one of claims 1 to 22.

10 24. The use of the product as claimed in claim 23 in grouts, mortars or concretes.

15 25. The use of the product as claimed in claim 23 in tiling bonding cements, pointing cements, single surface dressings, external thermal insulation systems, smoothing and finishing coatings, adhesives and coatings for insulating complexes, repair mortars, leaktight coatings and grouts for the cementation of
20 oil wells.